Amendment to the Claims:

1 (currently amended): A method of calculating <u>a switching threshold delay and a slope delay for a gate input signal of a cell</u> ~~Thevenin parameters~~ comprising [[the]] steps of:

(a) initializing estimates of <u>a first</u> effective <u>capacitance</u> ~~capacitances~~ *Ceff1*<u>, of a second effective capacitance</u> [[and]] *Ceff2*, of a switching threshold delay *t0*, and of a slope delay *deltat* <u>for a gate input signal of a cell</u>; [[and]]

(b) solving ramp response equations <u>for a capacitive load and a driver resistance to calculate solutions</u> for *t0* and *deltat* as a function of <u>the first effective capacitance</u> *Ceff1* <u>for a rising or falling transition voltage of the gate input signal</u> and <u>as a function of the second effective capacitance</u> *Ceff2* <u>for fifty percent of a final transition voltage of the gate input signal;</u>

<u>(c) if the calculated solutions for *t0* and *deltat* have converged to the estimates of *t0* and *deltat* within a desired accuracy, then continuing from step (e), else continuing from step (d);</u>

<u>(d) replacing the estimates of *t0* and *deltat* with the calculated solutions for *t0* and *deltat*, respectively, and continuing from step (b); and</u>

<u>(e) generating as output the calculated solutions for the switching threshold delay *t0* and the slope delay *deltat* for the gate input signal of the cell</u>.

2-4 (canceled)

5 (currently amended): The method of Claim <u>1</u> [[3]]

further comprising the step of (f) calculating a solution for a first delay *delay1* to the rising or falling transition voltage of the gate input signal as a function of the estimate of the first effective capacitance *Ceff1* ~~*t30(Ceff1) or t70(Ceff1)*~~ and a solution for a second delay *delay2* to fifty percent of the final transition voltage of the gate input signal as a function of the estimate of the second effective capacitance *Ceff2* ~~*t50(Ceff2)*~~ from a Foster or a pi model.

6 (currently amended): The method of Claim 5 further comprising the step of (g) comparing the delays *delay1* and *delay2* to delays *delay1'* and *delay2'* respectively, wherein the delays *delay1'* and *delay2'* are estimated from a function of input ramptime and capacitance corresponding to the estimates of the effective capacitances *Ceff1* and *Ceff2*, respectively ~~in a delay lookup table~~.

7 (currently amended): The method of Claim 6 further comprising the step of (h) replacing the estimates of the effective capacitances *Ceff1* and *Ceff2* with ~~finding~~ new values ~~for *Ceff1* and *Ceff2*~~ from the function of input ramptime and capacitance ~~a reverse lookup of *delay1* and *delay2* in the delay lookup table~~ if the delays *delay1* and *delay2* have not converged to the delays *delay1'* and *delay2'* within a desired accuracy.

8 (canceled)

9 (currently amended): The method of Claim 7 [[8]] further comprising the step of (i) [[(j)]] repeating steps (b) through (h) [[(i)]] until the delays *delay1* and *delay2* converge to the delays *delay1'* and *delay2'* within a desired accuracy.

10 (currently amended): A computer program product comprising:

a medium for embodying a computer program for input to a computer; and

a computer program embodied in the medium for causing the computer to perform steps of ~~at least one of the following functions~~:

(a) initializing estimates of a first effective capacitance ~~capacitances~~ *Ceff1*, of a second effective capacitance [[and]] *Ceff2*, of a switching threshold delay *t0*, and of a slope delay *deltat* for a gate input signal of a cell; [[and]]

(b) solving ramp response equations for a capacitive load and a driver resistance to calculate solutions for *t0* and *deltat* as a function of the first effective capacitance *Ceff1* for a rising or falling transition voltage of the gate input signal and as a function of the second effective capacitance *Ceff2* for fifty percent of a final transition voltage of the gate input signal;

(c) if the calculated solutions for *t0* and *deltat* have converged to the estimates of *t0* and *deltat* within a desired accuracy, then continuing from step (e), else continuing from step (d);

(d) replacing the estimates of *t0* and *deltat* with the calculated solutions for *t0* and *deltat*, respectively, and continuing from step (b); and

(e) generating as output the calculated solutions for the switching threshold delay *t0* and the slope delay *deltat* for the gate input signal of the cell.

~~(c) comparing the estimates of *t0* and *deltat* with solutions for *t0* and *deltat* found in step (b);~~

~~(d) replacing the estimates of *t0* and *deltat* with~~

~~the solutions for *t0* and *deltat* if the solutions for *t0* and *deltat* have not converged to the estimates of *t0* and *deltat*;~~

~~(e) repeating steps (b), (c), and (d) until the solutions for *t0* and *deltat* converge to the estimates of *t0* and *deltat*;~~

~~(f) calculating a *delay1* as a function of *t30(Ceff1)* or *t70(Ceff1)* and a *delay2* as a function of *t50(Ceff2)* from a Foster or a pi model;~~

~~(g) comparing *delay1* and *delay2* to delays *delay1'* and *delay2'* corresponding to *Ceff1* and *Ceff2* in a delay lookup table;~~

(h) ~~finding new values for *Ceff1* and *Ceff2* from a reverse lookup of *delay1* and *delay2* in the delay lookup table if *delay1* and *delay2* have not converged to *delay1'* and *delay2'*;~~

(i) ~~replacing the estimates of *Ceff1* and *Ceff2* in step (b) with the new values for *Ceff1* and *Ceff2*; and~~

~~(j) repeating steps (b) through (i) until *delay1* and *delay2* converge to *delay1'* and *delay2'*.~~

11 (new): The computer program product of Claim 10 further comprising the step of (f) calculating a solution for a first delay *delay1* to the rising or falling transition voltage of the gate input signal as a function of the estimate of the first effective capacitance *Ceff1* and a solution for a second delay *delay2* to fifty percent of the final transition voltage of the gate input signal as a function of the estimate of the second effective capacitance *Ceff2*.

12 (new): The computer program product of Claim 11 further comprising the step of (g) comparing the delays *delay1* and *delay2* to delays *delay1'* and *delay2'* respectively, wherein

*delay1'* and *delay2'* are calculated as a function of input ramptime and capacitance corresponding to the estimates of the effective capacitances *Ceff1* and *Ceff2*.

13 (new): The computer program product of Claim 12 further comprising the step of (h) replacing the estimates of the effective capacitances *Ceff1* and *Ceff2* with new values from the function of input ramptime and capacitance if the delays *delay1* and *delay2* have not converged to the delays *delay1'* and *delay2'* within a desired accuracy.

14 (new): The computer program product of Claim 13 further comprising the step of (i) repeating steps (b) through (h) until the delays *delay1* and *delay2* converge to the delays *delay1'* and *delay2'* within a desired accuracy.

15 (new): The computer program product of Claim 14 further comprising the step of (j) generating as output the calculated solution for the first delay *delay1* as a function of the estimate of the first effective capacitance *Ceff1* and the calculated solution for the second delay *delay2* as a function of the estimate of the second effective capacitance *Ceff2*.

16 (new): The method of Claim 9 further comprising the step of (j) generating as output the calculated solution for the first delay *delay1* as a function of the estimate of the first effective capacitance *Ceff1* and the calculated solution for the second delay *delay2* as a function of the estimate of the second effective capacitance *Ceff2*.